

Listing of Claims

What is claimed is:

1-15. (Canceled)

16. (Previously Presented) A method for enabling a receiver in a digital subscriber network to request services, the method comprising the steps of:

receiving, at a receiver, a dynamic network information table inserted within a transport stream from a first device, the dynamic network information table including a device-specific subtable and an upstream subtable, the device-specific subtable including information associated with transmission characteristics of the first device, the first device positioned in the digital subscriber network upstream with respect to the receiver, the upstream subtable including information associated with transmission characteristics of one or more devices positioned in the digital subscriber network upstream with respect to the first device; and
transmitting a request for a service, the requested service including at least a portion of the information included in the dynamic network information table.

17. (Previously Presented) The method of claim 16, further including the steps of:

identifying from the dynamic network information table an upstream device associated with the requested service; and
including the identification of the upstream device in the transmitted request for the service.

18. (Previously Presented) The method of claim 17, further including the step of:

identifying a controller associated with the identified upstream device;
wherein transmitting the request for the service includes transmitting the request to the controller.

19. (Original) The method of claim 16, further including the steps of:
determining a communication path through the digital subscriber network for the requested service; and
including the communication path in the transmitted request for the service.

20. (Original) The method of claim 19, wherein the communication path is determined based upon network information included in the received dynamic network information table.

21. (Original) The method of claim 20, wherein the dynamic network information table includes available bandwidth of at least one upstream communication link in the digital subscriber network.

22-24. (Canceled)

25. (Previously Presented) The method of claim 16, wherein the dynamic network information table is included in a packet having a reserved packet identifier associated therewith.

26. (Original) The method of claim 25, wherein the packet is a program association table packet.

27. (Withdrawn) A method for providing services to a receiver in a digital subscriber network, the method comprising the steps of:

receiving from a receiver a request for a service, the request including network information related to at least one characteristic of a plurality of transport streams transmitted within the digital subscriber network to the receiver;

processing the request for the service using the received network information to determine which one or more transport streams of the plurality of transport streams have sufficient bandwidth to provide the requested service; and providing the requested service to the receiver based on the determination of which one or more transport streams have sufficient bandwidth.

28. (Withdrawn) The method of claim 27, wherein the received network information includes an identifier for a device associated with the requested service.

29. (Withdrawn) The method of claim 28, wherein the requested service is a pay-per-view program and the device is a VOD server having the requested program stored therein.

30. (Withdrawn) The method of claim 27, wherein the network information includes information related to the available bandwidth through at least one communication link of the digital subscriber network.

31. (Withdrawn) The method of claim 30, wherein the network information includes information related to a device associated with the requested service, and the device and the receiver are coupled by a first communication link of the at least one communication link.

32. (Withdrawn) The method of claim 27, wherein the step of processing further includes the step of:

reading the received network information to determine at least one device that is associated with the requested service.

33. (Withdrawn) The method of claim 32, wherein the at least one device is a plurality of devices, and further including the step of:

using information included in the received network information to determine which particular device of the plurality of devices shall transmit the requested service to the receiver; and

wherein the step of providing further includes:

sending a message to the particular device to initiate transmission of the requested service.

34. (Withdrawn) The method of claim 33, wherein the network information includes bandwidth information for communication links between the plurality of devices and the receiver, and the bandwidth information is used for determining the particular device.

35. (Previously Presented) An apparatus in a digital network coupled to a first communication link and a second communication link, the apparatus comprising:

an input port adapted to receive a first transport stream through a first communication link, the first transport stream including a first dynamic network information table, the first dynamic network information table including network information related to an identifier corresponding to an upstream device in communication with the first communication link;

a processor in communication with the input port, the processor adapted to determine network information related to the received transport stream, the processor further adapted to create a second dynamic network information table, the second dynamic network information table having an identifier associated with said apparatus and the network information included in the first dynamic network information table; and

a transmitter in communication with the processor, the transmitter adapted to transmit the second dynamic network information table through the second communication link.

36. (Previously Presented) The apparatus of claim 35, wherein the processor is further adapted to insert the second dynamic network information table in a second transport stream, and the transmitter is adapted to transmit the second transport stream.

37. (Original) The apparatus of claim 36, wherein the second transport stream includes multiple elementary streams of the first transport stream.

38. (Previously Presented) The apparatus of claim 35, wherein the network information includes a transport stream identifier for the first transport stream.

39. (Previously Presented) The apparatus of claim 35, wherein the network information includes transport stream information related to the first transport stream.

40. (Previously Presented) The apparatus of claim 39, wherein the transport stream information includes information related to the type of packets contained in the first transport stream.

41. (Canceled)

42. (Previously Presented) The apparatus of claim 35, wherein the processor is further adapted to periodically create dynamic network information tables based on information specific to said apparatus and based on dynamic network information tables received at the input port.

43. (Canceled)

44. (Previously Presented) The apparatus of claim 35, wherein the first dynamic network information table is included in a program association table of the first

transport stream.

45. (Canceled)

46. (Previously Presented) The apparatus of claim 35, wherein the second dynamic network information table is included in a program association table of the second transport stream.

47. (Previously Presented) The apparatus of claim 35, further comprising a plurality of transmitters, each transmitter having an identifier associated therewith, wherein the processor is adapted to create a dynamic network information table having a transmitter identifier included therein for each transmitter.

48. (Original) The apparatus of claim 35, wherein the processor is further adapted to monitor the first communication link and respond to changes in the first communication link by generating an alert message and sending the alert message to the transmitter, wherein the transmitter transmits the alert message through the second communication link.

49. (Previously Presented) A method for propagating network information in a digital broadband delivery system, the method comprising:
receiving in a first device a first transport stream from an upstream device, the first transport stream including a first dynamic network information table, the first dynamic network information table including network information related to at least one characteristic of one or more transport streams transmitted within the digital broadband delivery system;
inserting the network information and information specific to the first device in a packet of a second transport stream; and
transmitting the second transport stream to a downstream device.

50. (Previously Presented) The method of claim 49, wherein the network information includes a transport stream identifier (TSID) for the first transport stream.

51. (Previously Presented) The method of claim 49, wherein the network information includes a transport stream identifier (TSID) for the second transport stream.

52. (Previously Presented) The method of claim 49, wherein the network information includes an identification of the first device.

53. (Previously Presented) The method of claim 49, wherein the network information includes an identification of at least one upstream device.

54. (Previously Presented) The method of claim 49, wherein the network information includes bandwidth availability information.

55. (Previously Presented) The method of claim 49, wherein the network information includes bit error information.

56. (Previously Presented) The method of claim 49, wherein the network information includes the status of at least one communication link between the first device and at least one upstream device.

57. (Canceled)

58. (Previously Presented) The method of claim 49, wherein the network information and information specific to the first device is included in a second dynamic network information table, the method further comprising transmitting the second dynamic network information table from the first device.

59. (Canceled)

60. (Previously Presented) The method of claim 58, further comprising: receiving the first transport stream through a first communication link; and transmitting the second dynamic network information table through a second communication link.

61. (Previously Presented) The method of claim 49, further comprising:
periodically transmitting the network information.
62. (Previously Presented) The method of claim 49, wherein the first device receives the transport stream through a first communication link, the method further comprising:
determining a first set of values from the network information;
monitoring the first communication link to determine a second set of network information values; and
responding to a change between the first set of network information values and the second set of network information values by transmitting the second set of network information values through a second communication link.
63. (Previously Presented) The method of claim 49, further comprising:
periodically receiving a dynamic network information table in the received transport stream; and
responding to a change in the periodicity of received dynamic network information tables by sending an alert message.